

Date: Mon, 26 Sep 94 04:30:10 PDT
From: Ham-Ant Mailing List and Newsgroup <ham-ant@ucsd.edu>
Errors-To: Ham-Ant-Errors@UCSD.Edu
Reply-To: Ham-Ant@UCSD.Edu
Precedence: Bulk
Subject: Ham-Ant Digest V94 #321
To: Ham-Ant

Ham-Ant Digest Mon, 26 Sep 94 Volume 94 : Issue 321

Today's Topics:

 antenna K factor again
 I need antenna matching software
 Internet Antenna Reflector?
 J pole antenna program, IBM PC, twinlead
 Place to get MFJ-259 cheap? (2 msgs)
 Pool screen as ground?
 SAREX antenna?

Send Replies or notes for publication to: <Ham-Ant@UCSD.Edu>

Send subscription requests to: <Ham-Ant-REQUEST@UCSD.Edu>

Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Ant Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-ant".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Sun, 25 Sep 1994 16:23:21 GMT
From: iglou!iglou!jockellp@uunet.uu.net
Subject: antenna K factor again
To: ham-ant@ucsd.edu

How does one calculate the "K factor" associated with a given antenna
element diameter and a given frequency? Normally this only comes into
play at VHF / UHF frequencies. For example, to calculate the length of a
dipole (in inches) at 146 MHz:

5905

----- X (K factor) = length of dipole (in inches)
146

If the element diameter is 1/2" and the frequency is 146 MHz, how does
one calculate "K"? The only reference I have seen in the standard

sources (ARRL books, 73 Magazine pubs, etc.) are to charts where the K factor is looked-up. But how does one calculate it? It is not the wavelength divided by element diameter (as suggested by some).

Anyone know the formula?

Again, my apologies to those who may have responded before.

73, phil - N4GWV

Date: Wed, 21 Sep 1994 12:43:48 GMT
From: ihnp4.ucsd.edu!ucsnews!sol.ctr.columbia.edu!spool.mu.edu!
howland.reston.ans.net!gatech!wa4mei!ke4zv!gary@network.ucsd.edu
Subject: I need antenna matching software
To: ham-ant@ucsd.edu

In article <35p30s\$2jh0@info2.rus.uni-stuttgart.de> moritz@ipers1.e-technik.uni-stuttgart.de () writes:

>I am afraid that a wswr of 1.05 is far beyond the limit of what
>can be measured correctly and what is really neccesary for
>any transmitter around.

Not at all, Moritz, a VSWR *maximum* of 1.05:1 is necessary for TV broadcast. Anything greater than that introduces unacceptable transmission line ghosting. It's not hard to measure with a TDR.

Gary

--
Gary Coffman KE4ZV | You make it, | gatech!wa4mei!ke4zv!gary
Destructive Testing Systems | we break it. | uunet!rsiatl!ke4zv!gary
534 Shannon Way | Guaranteed! | emory!kd4nc!ke4zv!gary
Lawrenceville, GA 30244 | gary@ke4zv.atl.ga.us

Date: 25 Sep 94 03:42:05 GMT
From: news-mail-gateway@ucsd.edu
Subject: Internet Antenna Reflector?
To: ham-ant@ucsd.edu

I was wondering if anyone knows of an HF antenna/Amateur Antenna reflector??
I am very new to this reflector and I am willing to bet this question has been asked before. 73 Gary K9GS

Date: Sat, 24 Sep 1994 05:49:51 GMT
From: ucsnews!sol.ctr.columbia.edu!howland.reston.ans.net!europa.eng.gtefsd.com!
newsxfer.itd.umich.edu!zip.eecs.umich.edu!yeshua.marcam.com!
charnel.ecst.csuchico.edu!csusac!csus.@ihnp4.ucsd.edu
Subject: J pole antenna program, IBM PC, twinlead
To: ham-ant@ucsd.edu

In article <CwJFKq.Duy@usenet.ucs.indiana.edu> battin@cyclops.iucf.indiana.edu
(Laurence Gene Battin) writes:

>> If you have a PC, the below uuencoded files will do any VHF and
>> UHF freq you want. Jpole.exe is the program, Jpole.pif if you
>
>Nice program! One question though (maybe I'm dense or something):
>Which part of the 300 ohm line does the center conductor of the
>coax attach to, the part with the 1/4" gap or the other side, or
>does it matter?
>Tnx.

Date: Sun, 25 Sep 94 08:10:38 mdt
From: ihnp4.ucsd.edu!dog.ee.lbl.gov!agate!howland.reston.ans.net!usc!
elroy.jpl.nasa.gov!netline-fddi.jpl.nasa.gov!nntp-server.caltech.edu!
ferrari.mst6.lanl.gov!newshost.lanl.gov!usenet@network.
Subject: Place to get MFJ-259 cheap?
To: ham-ant@ucsd.edu

> I want to get an MFJ-259 antenna analyser. Is there any place that
> has them for significantly less then the \$219. list?
> thanks, and 73, doug

Yes there is I have the receipt for mine right here on my desk.
I paid \$189.00 at a hamfest. Two weeks ago the same outfit had the
same price at another hamfest. The company is RAD-COMM Radio
3300 82nd Street Suite E Lubbock, Tx. 79423 phone 1-800-588-2426
or 806-792-3669 It is run by Rickey Roy KB5KJY and his wife Karen N5WPJ
they are good guys and on what they stock usually have the best
price. Always look for the little guys. Someone has to pay for the
slick ads the big outfits run in the ham rags that someone is you.
Tell Rick the guy who won the Scout at the Northern New Mexico
hamfest sent you. 73 de Jerry KC5EGG

Date: Sun, 25 Sep 1994 06:06:59 GMT

From: netcomsv!netcom.com!netcom2!faunt@decwrl.dec.com
Subject: Place to get MFJ-259 cheap?
To: ham-ant@ucsd.edu

I want to get an MFJ-259 antenna analyser. Is there any place that has them for significantly less than the \$219. list?
thanks, and 73, doug

Date: Mon, 19 Sep 1994 12:17:28 GMT
From: ihnp4.ucsd.edu!ucsnews!sol.ctr.columbia.edu!spool.mu.edu!
howland.reston.ans.net!gatech!wa4mei!ke4zv!gary@network.ucsd.edu
Subject: Pool screen as ground?
To: ham-ant@ucsd.edu

In article <ZKwQ3xl.jim3804@delphi.com> Jim Clark <jim3804@delphi.com> writes:
>This may be stupid, but...I'm going to mount a vertical near my
>pool screen (in Florida) ..can I take the negative of being near a major metal
>structure with a ground-mounted vertical by tying a ground radial into then?
>If so, should I ground the pool screen with a ground rod(it doesn't
>contact the ground)? Would anyone touching the screen during transmitting
>be in danger of RF burns?

You bet they will, even if you don't tie it in as a counterpoise, but especially if you do. If it's near the ground mounted vertical, and ungrounded, it'll be hot from induction. If you tie it in as a counterpoise, it'll be hotter. You'll need to ground this puppy very well. A single rod connected at a single point won't cut it. You need to *RF ground* it. That requires using several ground rods so that no ungrounded part of the screen approaches a HF 1/4-wave at any frequency you may operate. It'll make a better ground mirror for the vertical after you do that too.

Gary

--

Gary Coffman KE4ZV		You make it,		gatech!wa4mei!ke4zv!gary
Destructive Testing Systems		we break it.		uunet!rsiatl!ke4zv!gary
534 Shannon Way		Guaranteed!		emory!kd4nc!ke4zv!gary
Lawrenceville, GA 30244				gary@ke4zv.atl.ga.us

Date: Mon, 19 Sep 1994 12:32:33 GMT
From: ihnp4.ucsd.edu!ucsnews!sol.ctr.columbia.edu!spool.mu.edu!
howland.reston.ans.net!gatech!wa4mei!ke4zv!gary@network.ucsd.edu
Subject: SAREX antenna?
To: ham-ant@ucsd.edu

In article <CwCp1M.x1@kd3bj.uucp> bbsuser@kd3bj.uucp (General BBS user login) writes:

>dougfree@onramp.net (Doug Freeman) writes:

>> After using MacSPOC to figure out when STS-69 was coming over Dallas To much delight I was Just able to here some transmissions last Sunday. I was using a home made JPole. What is the best antenna configuration for SAREX?

>

>QST articles have recommended a turnstile antenna for working the
>shuttle. A turnstile is two dipoles at right angles fed appropriately
>and placed over a counterpoise. Kind of like a "twist" type beam antenna
>with a big reflector. The turnstile thus constructed radiates upward
>with a broad beam width, eliminating the need to track the shuttle.

AMSAT no longer recomends this style of antenna. Its pattern is mostly
up as you noted. That's when satelllites are at their nearest approach
to you, and when you need the *least* antenna gain. It's also the shortest
part of the time the satellite will be above your horizon. The majority
of time on any pass will happen with the satelllites less than 30 degrees
above your horizon. So you want to concentrate antenna patterns there.

A *gain* vertical concentrates it's pattern too low on the horizon
and misses most of the higher part of a pass. A simple 1/4-wave
vertical works better, but has a narrow hole at zenith that can
cause a fade there. Something like a Lindenblad or Eggbeater
style antenna works best as an antenna that doesn't need rotors.
You want a pattern that looks like a flattened hemisphere with
its major bulge at the 30 degree above the horizon mark.

Gary

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End of Ham-Ant Digest V94 #321
